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3335 Main St., Buffalo 14, New York

Editor
CHARLES H. KEENE, M.D.
University of Buffalo, Buffalo, N. Y.

Assistant Editor
GERTRUDE E. CROMWELL, R.N.
Des Moines, Iowa

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SHOULD VITAMIN D BE GIVEN ONLY TO INFANTS?

VITAMIN D has been so successful in preventing rickets during infancy that there has been little emphasis on continuing its use after the second year.

But now a careful histologic study has been made which reveals a startlingly high incidence of rickets in children 2 to 14 years old. Follis, Jackson, Eliot, and Park* report that postmortem examination of 230 children of this age group showed the total prevalence of rickets to be 46.5%.

Rachitic changes were present as late as the fourteenth year, and the incidence was higher among children dying from acute disease than in those dying of chronic disease.

The authors conclude, "We doubt if slight degrees of rickets, such as we found in many of our children, interfere with health and development, but our studies as a whole afford reason to prolong administration of vitamin D to the age limit of our study, the fourteenth year, and especially indicate the necessity to suspect and to take the necessary measures to guard against rickets in sick children."

*R. H. Follis, D. Jackson, M. M. Eliot, and E. A. Park: Prevalence of rickets in children between two and fourteen years of age, Am. J. Dis. Child. 66:1-11, July 1943.

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THE JOURNAL OF SCHOOL HEALTH

Devoted to the interests and advancement of school health service and instruction. Your participation by membership is solicited.

Vol. XIV DECEMBER, 1944 No. 10

A COMMITTEE REPORT ON INTEGRATION OF COMMUNITY HEALTH EDUCATION AND SCHOOL HEALTH EDUCATION*

SUE HURST THOMPSON, M.D., M.P.H.

Columbia County Health Commissioner, Hudson, New York

Direct instruction in health education for the school child is of little value if his experiences at school, in the home, and in the community contradict what he is taught. Successful problem-solving with demonstrated beneficial results is an ideal educational procedure. The child who *participates* in the study and solution of personal and community health problems will have a learning experience which influences his health behavior. When the child becomes an adult citizen, these school experiences will be reflected in his interest, participation and insistence on adequate community

Recommendations, — How can health education in schools avoid a purely academic approach and concern itself with the real life problems of the pupils? How can it develop healthful attitudes in pupils rather than merely the assimilation of facts? The Committee of the American School Health Association on Integration of *Community Health Education* and *School Health Education* recommends the following four procedures:

1. The school should concern itself with the educational aspects of all the child's experiences at school which may relate to the development of health attitudes, in order that the indirect learnings outside the hygiene class may be consistent with, and as valuable as, the direct instruction in hygiene.
2. The school should have a *planned curriculum* for health teaching to meet the needs of the local situation. This

* Presented before the American School Health Association Annual Meeting, New York, October 2, 1944.

Dr. Claire Turner when called to other areas requested me to act as chairman of this committee. This paper has been compiled with the kind assistance of the other committee members: Dr. John D. Fuller, Mr. S. S. Lifson, Mr. Philip Riley, Dr. John L. C. Goffin and Dr. Turner. Dr. Turner has requested that I present this report. S. H. T.

should be broadened in accordance with the level of maturity of the pupils to include community health problems. And the program of health teaching should be supplemented and enhanced by opportunities for providing *problem- solving situations* which may be found or arise in the community outside of classroom.

3. In teacher-training institutions, the pre-service teachers should be given full opportunity to realize the value of the *problem-solving* methods in their classroom programs. Teachers now in service should have ample opportunity for *in-service* study in the field of health education.
4. There should be close co-ordination of efforts between the school system and the health department in order that the objectives of both the school and the community program may be achieved.

The Execution of These Procedures,—First,: The school should concern itself with the educational aspects of all the child's experiences. Most schools need a more adequate and practical graded program of health instruction—one which employs a *problem-solving* approach, the child taking an active part in the solution of his own and community health problems.

Health instruction should be carried on, using the problem-solving approach, as a continuous, expanding process through kindergarten; through elementary and secondary schools; through the summer camp-life of the progressive school plan; through the civilian and military preparation training year that may eventually parallel or follow high school. Thus, when the child reaches adulthood, these school experiences will reflect in his health—appreciation, practices and standards.

The school should concern itself with the *educational aspects* of the chief health experience in the child's school life—his physical examination. Whether it is an annual routine according to law or custom, or, whether it is made at a greater interval, it should be related to the development of health attiudes by motivating methods of learning. The child should be prepared well in advance, for this experience. Purposes, objectives and plans, materials and methods should be discussed with him. Just as cumulative records of each child's health are forwarded from one grade to the next, so the special data in relation to his unsolved personal or community problems should also be passed along through the child's school life.

A second experience in problem-solving health teaching should be active participation and interest by the child, his teacher and

community in the proper maintenance of the school environment. Every child has a right to attend a school that is sanitary, well lighted, heated, ventilated and which provides proper accommodations for rest and recreation.

It would seem essential that one person be held responsible for a unified program in each school; and that the principal assign a health coordinator to meet wih him and the faculty early in the school year, and at intervals thereafter in order to plan such. The correlator of school health education should interrelate the graded health curriculum with the total school curriculum as far as consistent, and indicate to the teacher materials and methods which may be valuable in the health problem-solving approach.

Second: The school should have a planned health curriculum and it should be expanded to include problems and needs of the community. Do not adult and community health education parallel the child's health education? Are they not themselves a function of the school? The child, besides being a member of his class and of his school group, is also a member of his family and of the larger social group—the community. Thus, basically and inherently, school health education and community health education are integrated.

What is the function of education in a democracy? It is not essentially training the child but to give him a suitable training ground—such surroundings and atmosphere that he cannot help but react in an orderly, discerning, democratic manner—with a healthy state of both body and mind!

The school logically then, may share interest and leadership in any program of current community need. Health educational planning must be harmonious and coordinate with health community planning, for both depend on the culture of the area. Both depend on a consideration of the attitudes of the district. Both must be in unanimity with official and non-official groups. Both must appreciate that the school health pupils of today are the community health citizens of tomorrow. Both must help the boys and girls to assume responsibilities as well as share the privileges of the democratic way of life.

Third: The problem-solving method of health education with its integration of school and community health education should be included in the prescribed curriculum of all teacher-training institutions. Because some teachers may not have had the advantage of modern health courses, and because health medical sciences are far from static, it is necessary that teachers be given ample opportunity for in-service study in health teaching.

The teacher should be helped to see that she herself must be an active participant in community health activities before she can lead her pupils so to participate. By carrying out plans—and *again* carrying out plans—the teacher grows—the pupil grows. True, classroom experience is itself a great teacher if problem-solving is linked with it; but in order to analyze and think through health problems, education for the teacher is given best if first presented in the teacher-training institution previous to her entering the classroom.

Fourth: Coordination between the school system and the health department should be close. The school system—and especially its medical department, its health correlator and its principal—wishes to know how it may cooperate with the health department. The official health agency—health officer, nurses, sanitarian and veterinarian—wishes to know how it may cooperate most efficiently with the school system. It is wise that representatives of the two groups meet again and again and work out their plans together, to achieve the objectives of both.

The school physicians and school nurses should share in the general public health program and be an essential link in its chain. Efficiency of services rendered by the school doctor and school nurse depend on the services of the official and non-official health agencies.

The health service program of the official health department should be made of educational value to the school system teachers, health correlators and pupils. Leadership is essential. Just as a health correlator is valuable in the school system, so also is a health educator of inestimable value in an official health agency.

Evaluation of Methods,—It is true that from the age of Plato up to the era of Churchill, Stalin and Roosevelt, health has been the major objective of education. It is true that through all periods, health has had a fairly progressive course. It is true also that immense strides have been made at various periods and especially during the last forty years. But why is it that it has taken a war—a gigantic war of all nations—to evaluate results? Why has it taken a world conflict—one at such a price—to be the tremendous appraiser of the health education of the school and the community? No wonder our 1944 thinking has been challenged, as physical and mental defects have withheld our high school graduates from participating in our nation's defense! No wonder these poor health conditions are thought unsuitable for our civilian life if thought unsuitable for our army life. Our ideas have been activated. Rightly so! Something has been found missing, not so much in the content of the school's health teaching, but in the methods used.

School and community recognize this lack and already they are making plans to bridge it.

It has taken a sense of failure to show us the light. We do not, however, under-estimate the splendid progress of recent years when our thoughts focus on this lack of attention to good health habits. We do not belittle the fact that instruction in physiology and hygiene is required by law already in fory states, when we note that teaching methods have not included sufficient practical coordination in a person's living. It is essential, then, that in rating a program, one must measure the extent of the problem-solving methods and the integration as evidenced by improved health conditions.

Certain appraisals have been promoted which evaluate the newly re-directed educational efforts. One of especial interest to the school health correlator is the Evaluation Schedule of the American Public Health Association which is used in estimating the worth of community health programs. No better ideals have been established for a school health program. No more efficient standards have been formulated than these. It would be an energizing criterion though, for those primarily interested in school health, if they had their own *National School Health Honor Roll* in which major emphasis was given to the collaboration of school health education and community health education.

Concrete and Workable Examples,--Most of the States are planning some re-directed type of health education for the schools that ties up essentially with the community. In the present plans in New York State this fall, calling for a high school hygiene course satisfactorily completed before graduation, this correlation is stressed.

Connecticut is beginning an extensive revision of its whole health program. Likewise it is just beginning the development of work in health education with the secondary schools.

North Carolina has as its goal a health educator in every local health department. These health educators plan to work with the schools. What better their main purpose than to bridge the gaps and prevent over-lapping of health work in the schools!

THE SCHOOL PHYSICIANS' APPROACH TO SCHOOL HEALTH SERVICE*

JOHN E. BURKE, M.D.

Asst. Superintendent, Public Schools, Schenectady, N. Y., and President, New York State School Physicians' Association

A large number of New York State physicians have at some time during their professional lives been health officers or school physicians or both. In a number of instances the same individual has acted at the same time as health officer and school physician. I believe there are still a few communities where this practice prevails. These men are primarily busy taking care of the sick in their communities. The jobs as health officer and school physician in their villages and towns and small cities are a secondary interest and often taken by the physician because he is the only physician available.

For a number of years the State Health Department has made it possible for interested physicians to take professional work which will better fit them to be health officers. Aspirants for full time positions must meet very definite requirements. The health department then seems to have decided on certain qualifications for health officers. The requirements for school physician are not as tangible. Several committees without the state have worked on requirements for school physicians. Some New York State committees have drawn up what appear to be good plans. We do not, however, in so far as I can learn, have any definite list of qualifications which a school board or a school administrator may feel binds him to hire a physician with certain qualifications as his school doctor.

It is quite evident that in most of our upstate communities the school physician is doing a rather creditable job in examining school children. In many small communities, because the school physician is the family physician, a follow up of children is effective. In larger communities, the part time school doctor can't do a very effective follow up of the children. The Nyswander effort in New York City is a step in the right direction. Upstate communities, however, do not have the trained leadership to carry on a plan like Mrs. Palmer's.

This discussion that I have been indulging in is preliminary to me asking just what there is in the work of a school physician to

* Read at Annual Meeting, American School Health Association, New York, October 2, 1944.

attract doctors to it? Should the physician be content in carrying out the purely professional, that is medically professional aspects of school doctoring? After a number of years in the school business, it is my judgment that if he does just this, it will be the contribution that the school administrator most wants. There isn't room in school for the doctor to do much administrative work. The school superintendent and the school principal and many directors and supervisors in city schools can perhaps do the administrative work in connection with health better than the busy physician. In the smaller schools the school principal or a teacher who is constantly with the children can function best. We might then omit from the school doctor's qualifications when we write them that he shall have certain training in education apart from his particular professional training. No one, of course, would decry having physicians skilled in the teaching and school administrative arts, but we know that there just isn't enough time in life to prepare thoroughly for more than one profession and keep abreast of one's profession's advances.

If then the physician who intends to be a school physician will keep in mind that he must be a good doctor and perfect himself to his capacity in his profession, he will merit the satisfactions which all humans want. He should particularly have training in psychiatry and pediatrics. These specialties in medicine are splendidly presented in many places in New York State.

Since he is to be employed as a physician in his school or schools, he will be consulted about all sorts of medical problems by parents, teachers, school nurses and others. He should talk freely to these school people about their particular problems. He, of course, will not take over the treatment of school people. Just how much he should do in each individual case will be a matter for him to decide, bearing in mind that he is not hired to carry on a medical practice in school. It will be, perhaps, easier, to draw the line in cases of physical illness than in certain cases of mental illness. Obviously, the school doctors as such should not take over the care of a child ill with scarlet fever. Should he do something, and if so how much, about the various mental hygiene problems that he will be called upon to see? This work, if he is to do it, will involve treating the whole patient or student.

For many years it has been rather troublesome to me to know just where the school doctor should stop in treating problem children. So many of these children have physical troubles that are contributing to a behavior that is asocial or to personality defects that are handicapping, that many schools through guidance depart-

ments, psychologists or others undertake quite extensive treatments. When I speak of treatments here I mean such treatment as would come under psychotherapy. Medicines are not, to my knowledge prescribed by any school workers. A lot of things called "nervous troubles" are included in the group that are treated by school people.

The point that I am driving at in connection with a school doctor's work is just this. The average upstate school doctor doesn't know exactly how much he should include in his duties as a school worker. When a child is presented to him for some reason that the principal, teacher or school nurse believes a physician might be the one to consult about such a matter, he necessarily should make an examination. This examination will be the best he can make with such school facilities as are at his disposal. Now if he finds certain evidences of physical illness, he will likely advise the parent or the teacher or the nurse that the child should be taken to his family physician or some physician for treatment. If he doesn't find much or any evidence of physical illness, he probably should and will recommend further study by the family physician. Some parents will act on these recommendations. Others will delay such studies if the child isn't complaining and if he appears to the parents to be all right. Now the psychoneurotic disorders are perhaps more definite disease entities and, therefore, rather more easily understood than the disorders of character and conduct. Changes in character and abnormalities of conduct are in many cases likely to give concern to friends and neighbors and teachers of a child rather than to the child himself. In cases of anxiety states, hysteria and things like obsessional conditions the converse is true.

For the most part, disorders of character, and conduct have been regarded as belonging to the province of anyone except the doctor. We know now that these conditions are disorders of the mind and as such come within the province of every medical man.

Abnormalities of character have in the past often been dismissed as eccentricity, and when that verdict had been passed there was no more to be said, and usually the eccentric person was regarded as a nuisance and brushed off by all who happened to be thrown in his pathway. Just so, disorders of sex for so long a time were problems for the courts. Delinquencies of various kinds were left entirely to the home, the clergy and the police. Now all these behavior and character deviations are seen in our schools. Should the school doctor do anything about such problems?

We must not shut our eyes to physical factors in the causation of these conditions, for it has been brought home to us very forcibly in recent years how serious can be the after results of encephalitis which may produce the most marked character changes and give rise to delinquent trends of which there was no previous indication. Disorders of the central nervous system must always be excluded before we can assume that illness is psychological in origin. The endocrines, little as most of us know about them, doubtless play a large part in many of our character and personality disorders.

In the main, the disorders of character and conduct which we meet in every day life are the result of psychological causes, and the mechanisms which produce them are precisely the same as those which give rise to the more definite psychoneurotic illnesses.

The varieties of abnormalities in behavior are many. This is so because no two people are alike nor are the circumstances of their lives ever exactly similar. Since we are sure today that the cause of much of this abnormal behavior is within the physician's realm to look into and treat, just what part should the school doctor take in looking after these cases? In many of our schools, as I have previously stated, a great deal is done by non-medical people. It would seem that a physician should supervise this work. This, however is not the trend. The development of guidance departments in New York State is done wholly independent of physicians. It would be unfair to say that many of these people do not do a great deal for many children. They do. They do this, however, without medical supervision and one wonders sometimes if the practice of socialized medicine isn't a reality in the schools, the practitioners being non-medical people. It will be contended that school guidance includes many things besides the health of the student. It may, but the student's behavior and his physical and mental health are the matters that the guidance personnel seem most interested in and do most about.

I am not unaware that there always has been and likely always will be all sorts of advice and recommendations given by all sorts of people to others about their health and general wellbeing. I am also aware that there are not enough physicians, and probably never will be, to expect the physician to be the only one to practice psychotherapy. We need the co-operation of clergymen, teachers and other interested intelligent people to treat both adults and children who are psychoneurotic or who are suffering with character or conduct disorders. My wonderment, however, is that schools have not felt generally the necessity of having the school physician

direct this work rather than conduct it as is done in most places independent of the physician. This, of course, would involve the physician giving more time to the schools and, of course, would savor of practicing medicine in the schools. Should he do this or should this very important part of a physician's work be abandoned to the psychologist, guidance teacher, or to any teacher as it must be in small schools. It seems to me that we must very soon review the physician's duties as school doctor and decide whether he is simply to make physical examinations and advise parents and teachers of his findings, or whether, in the circumstances that I have been discussing, he who is on the spot in schools and sees children who need treatment should not do more about it than hope for parents to take these children somewhere for treatment.

Particularly, I am speaking now of all these troubles which we see that obviously are not questions of medication or short physical illnesses. In other words, I am principally thinking of the mental illnesses that I have briefly discussed.

Dr. Keene in the Journal of School Health, in the April number, reviewed some recent English legislation that provides for treatment for school children by the school physician. The exception, I believe, being that illnesses that necessitated the child being home, away from school were not the school physician's responsibility. Such an arrangement provides for the kind of cases I have been discussing. It is likely that we are not ready for any such legislation in this country, but it would seem that some legislation clarifying the medical group's position would be desirable.

Something will be and is being done about these cases by schools. It is right and proper that something should be done. Should the schools treat these children independent of medical supervision? Maybe this is all right. The writer has wondered, however, if this work, which is a physician's work, is generally being done by a non-medical person. Just when will the doctor be found unnecessary as a social employee?

It is this wonderment then, that has prompted me to raise this question of just what a school doctor should do, and to suggest that it might be well for us to redefine exactly what medical men believe should be included in the school doctor's duties.

PRACTICAL DENTAL HEALTH PROGRAM*

G. S. HILDRETH, D.D.S.
President-Elect, Akron Dental Society

Dental Science and scientific research have not yet found the exact cause of dental caries. Until the cause of this affliction has been definitely determined and scientifically tested, dental health must eminate from the dental chair. It is a rigid program of inspection, cleaning and filling, with dental hygiene instruction.

Success depends upon many factors, including Health and Appearance and both depend upon Teeth. If you consider success worth striving for, consult your dentist and care for your teeth.

Dental care and tooth preservation are as dependent upon a home-care program as upon regular visits to a dentist. Home-care is prevention, and accompanied with regular visits to the dentist of your choice every four months or as often as he directs it will be your assurance of better health, appearance and personality.

The present deplorable mouth and dental health conditions prevalent in the nation as reported in the first army selective service examinations were not news to your dentist. He has known these facts for years and that they exist due to a disinterested attitude on the part of the general public. Everything possible has been done by dentists to change this attitude, and a definite health education program has been instituted by all organized dental societies, through the efforts of their councils on dental health.

A National, State and Local program has been devised to meet the needs of all local communities wherein all interested health and civic organizations can be combined in one effort toward health education. Dentistry is working on a broadened perspective, and that is the giving of service. Dentists do nothing more, they do nothing less than serve the afflicted.

The public is being awakened to a realization of the needs of dental service and its importance as a health service. Dental programs in schools have resulted in reduction of repetition of grades, with resultant financial savings to the family pocket book, more efficiency, better health and growth development of children.

The dental health program has resulted in the formulation of working standards in industry and more efficiency among the employees. The health articles in newspapers and magazines giving facts about the necessity of dental health and general body health and the instituting of social legislation in England, the United

*Read before the Akron District Dental Educational Meeting, June 17, 1944.

States and twenty-four other countries, are awakening the public to a definite appreciation of dental service.

Through the efforts of organized dentistry and its council on dental health, plans are being developed over the entire country to relieve part of the urgent demands on dentists. Today even though there is a great shortage for service to the general public since care of the armed forces is essential, dentists are willing to accept their responsibility. With the co-operation of the common public this problem can be solved. It can be solved by research, prevention or home-care, and regular visits to the dental office. With a thorough and complete health education program the demands for dental service can be reduced by fifty per cent.

In Akron, Ohio, a health education program including an examination of all school children outside the city limits of Summit County, over a period of four years, showed a reduction in the needs for dental care. In 1940 a dentist was employed to complete and did complete this examination for dental needs among 4,860 children. They were all requested to see their dentists and have the necessary corrections made. A follow-up by the schools, teachers and dentist employed, with constant health education lectures, resulted in a reduction of twenty-one per cent of the needs for dental care among these children when a repeat examination was completed in 1944. It was found in the 1940 examination that seventy-nine per cent of all children needed dental attention. The 1944 recheck in the same schools showed a need for dental services of fifty-eight per cent among all children. It might further be stated that there were some new children and some removed to other homes and schools outside our jurisdiction which affected this report only slightly. It should be kept in mind that this was a result of a health education program. A continuation of such efforts elsewhere will be a definite step forward and help prevent dental physical defects from being cause for a twenty and nine-tenths per cent army rejection in the future, and being next to the top on the list of human physical disabilities.

Prevention is largely home-care and education along the lines of how best the home-care program can be carried forward. It can be further aided by nutrition. A diet which will supply the body with the necessary food elements for growth energy and repair of all body parts is necessary. Teeth and bones require food elements of which they are composed. The teeth need exercise as do other parts of the body. The child should be taught not to swallow his food half chewed, but to masticate it thoroughly. The jaw muscle and teeth can be fully developed by the stresses of mastication.

Food lodged indefinitely between the teeth decomposes and releases the acids responsible for the first breaches made in the enamel wall of the teeth. The germs of tooth decay thereby are permitted to invade the inner structure of the teeth.

The food which one eats controls the bacteria which cause this tooth decay. It has been found that these bacteria live on sugars and fine starches, both of which are too prevalent in the diet of children as well as adults. A basic diet which has almost no sugar in it, to include milk, eggs, butter, meat, colored vegetables, potatoes for two meals, fresh fruits, whole grain cereals and bread will reduce these bacteria and prevent the forming of the acids which dissolve the minerals from the teeth and start the cavities.

For children, periodic mouth examination in school and the follow-up work necessary to secure the correction of all tooth defects before decay can start are of vital importance because the condition of the teeth during childhood will leave on the health of the body a mark which will endure for a lifetime.

Parents should start taking the child to the dentist at not later than two years of age and every four months thereafter, or as often as advised by his dentist. At this first visit a prophylaxis, and X-ray examination should be made, together with a thorough home-care program established. Early and systematic attention will avoid future trouble and greatly improve the general health throughout life. Heredity, environment, and habits are some other factors which will greatly influence the dental as well as the general health of every one. Adequate dentistry should include the minimum amount of dentistry necessary to restore the mouth to good health and to maintain the teeth as long as possible. Your dentist believes a corrected dental health program will carry you through life without the loss of a single permanent tooth, and will add ten pleasurable years to every person's life. Accepted dentistry should be dentistry of a quality you will not excuse or criticize. Unless such minimum dental benefits are advocated and anticipated, dentistry in a health insurance program may repeat the error of dentistry abroad where "blood and vulcanite" have become the rule.

A health insurance program including dentistry, with the thought in mind of restoring all the mouths of the entire population of the United States to a healthy condition would require the services of 335,000 dentists for a period of five years; and at the end of that time the program would have to be started all over again for no provision could be made to keep in repair the mouths that had been rebuilt. There are only 72,000 dentists at present in the United States, including the 22,000 in the armed services, and the

financial administrative and manpower problems involved can readily be seen.

Let us therefore start with the children and see that they are well taken care of, and by health education and home-care reduce the needs for dentistry, until manpower can be sufficiently established to take care of our needs.

Care for your teeth day by day and cherish them, as you would a string of priceless pearls. Choose your dentist with the same care that you would your family doctor. He now has the methods and materials at his command to render you the highest form of service for health and appearance.

Your dentist is willing and ready to co-operate in any program that has as its objective research, education, and prevention.

The Tuberculosis Problem in the Postwar World,—The United States has been the most fortunate country as regards the trend of tuberculosis mortality during this war. At the outbreak of the conflict in Europe in 1939, the death rate from this cause in our country was 47 per 100,000. Each year since then has witnessed improvement, despite our entry into the war in 1941, with a consequent withdrawal of physicians from civilian life and the overcrowding of population around newly developed war industries; in 1943, the rate was about 42 per 100,000. England and Wales experienced a setback at first, the rate there rising from 62 to 69 per 100,000 between 1939 and 1941; but in the next two years the mortality from the disease took a definitely more favorable turn. In Scotland, too, the rate jumped in the first year of war, from 70 per 100,000 in 1939 to 80 in the next year, but there has been little improvement there since then. Canada, Australia, and New Zealand have been able to maintain their death rate from tuberculosis during the war period somewhat below the level immediately preceding. Thus, although our English-speaking Allies have not been able quite to maintain the very favorable prewar trends in tuberculosis mortality, they have, on the whole, not been seriously affected.

Very different has been the experience of the countries at war on the continent. As everyone knows, the peoples of the occupied countries have been subjected to untold misery and suffering. Vast numbers of the inhabitants have been uprooted from their homes; many fled from the reach of the ruthless invader, but others, less fortunate, were caught in the Nazi net and sent off to be used as slave labor or gathered in concentration camps.

(Continued on Page 264)

VITALIZE THE SCHOOL HEALTH PROGRAM

FLORENCE BENELL, M.S.P.H.
Health Education Director, The Tuberculosis Institute of Chicago and Cook County

Education has undergone many revolutionary changes, and so it must to progress. Unfortunately, however, methods of teaching and subject matter have not always kept in tune with the times. This fact is especially true with health education in the schools.

Let us, for example, compare a course in English with a course in hygiene as offered from the first grade through high school. I am certain very few people will disagree with the maxim that the English course content and presentation in the first grade varies considerably from that in the 8th or 12th grades. On the other hand, take the hygiene course content and presentation, many will agree that in the first grade Johnny is taught brush your teeth, get your vitamins, sleep so much, etc.; and in the 12th grade he gets the same routine. What has sorely been neglected has been Johnny's subject matter interest and his development of new interests in his environment.

To combat this discrepancy between student growth and development of new interests and the method of presentation of health education, the following plan is proposed. As presented here only a few ages, interests, and methods of presentation are taken to elucidate the plan.

Age	*Interests*	*Method of Presentation and Subject Matter Covered*
5	1. Imaginative age. a. Enjoys building castles out of blocks. b. Enjoys making up stories and games.	1. Have children build a mouth with teeth and play dentist (all imaginative of course).
	2. Gregarious.	2. Have colorful story books, a la Mickey-Mouse on brushing teeth, drinking milk, washing hands, covering nose and mouth when sneezing and coughing, etc.

Age	*Interests*	*Method of Presentation and Subject Matter Covered*
	3. Enjoys comics and colored picture books.	3. Have classroom health examination by teacher and supervision by nurse with parents present.
	4. Likes to play indoors or outdoors.	4. Have planned school lunches, everyone the same meal.
	5. Unless spoiled or allergic likes all foods and cod-liver oil.	5. Practice isolation of those with colds, etc.
6	Most of the above plus	Continue above plus
	1. Interest in reading.	1. Teach child how to use eyes properly by classroom demonstration—making book rests. Keep good lighting, no glare. Have class participation in visual testing along with other factors in health examination.
13-14	1. Awareness of opposite sex.	1. Explain endocrine changes going on and their effects on mental and physical development.
	2. Interest in care of skin.	2. Have discussion groups—question and answer sessions on sexual changes of both sexes to both sexes.
	3. Problems of a. Boy-girl relationship. b. Acne. c. Endocrine changes.	3. Provide adequate co-recreation with parent participation.
	4. Desire to learn how to dance.	4. Have Student Health Committee to discuss problems and methods of taking care of them.
	5. Interest in trips.	5. Have Student Health Committee, Sanitary Corps, Lighting Inspectors, Ventilation Inspectors, etc.

Age	*Interests*	*Method of Presentation and Subject Matter Covered*
	6. Interest in movies.	6. Have students plan a Health Carnival for May 1st. 7. Have social dancing in gym. 8. Classroom health examination. 9. School planned lunches. 10. Use of movies, slides, charts. 11. Community trips—sewage plant, etc.
16-17	1. Interest in opposite sex. 2. Interested in athletics. 3. Interest in cooking. 4. Interested in jobs. 5. Problems of drinking, smoking, sex offenses. 6. Civic interests.	1. Have student planned co-recreation. 2. Have discussions and question and answer panels on social hygiene, marriage, and the family. 3. Have cooking classes assist in supervision of school lunches and suggest possible combinations to be chosen at cafeteria. 4. Have discussions of foods—have charts, etc., put around school by combined efforts of cooking and drawing classes. 5. Have Student Health Committee to tackle school health problems —with co-operation of parents and teachers. 6. Discussion of health hazards "on the job" and how to prevent and combat them. 7. Offer courses in first aid and home nursing. 8. Have discussions and experiments on effects of athletics and exercise on the heart. 9. Use of advertising technics in presentation of health knowledge. 10. Community trips — health department, etc.

In other words, at the various age levels the student's interests change. Then why not teach subject matter in accordance with interests, and use methods that coincide with his development and growth.

In order to allow for flexibility, this plan has been presented in brief form. Anyone interested in using such a plan naturally would have to make the adjustments to his particular situation.

I have presented this idea with a view to making health education a more vital part of every day living. It is hoped by this method students will really live good health; not merely learn facts, parrot-fashion.

REVIEW

Health Instruction Yearbook,—*Oliver E. Byrd, Ed.D.*, Stanford University Press. The 1944 edition of this book, the second Yearbook by this author, is an excellent reference work for school health workers. The author has made a painstaking survey of the recent periodical health literature and has presented the essential material in a concise, well arranged, easily accessible form. A wide variety of subjects is covered, ranging from accident prevention to yellow fever. There is much attention to school health problems, community and social health, and mental, hygiene, heredity, and eugenics. The material is for the most part non-technical and pertinent to frequently encountered health problems.

This book will save the teacher, doctor, nurse, or public speaker many weary hours of research and reading. Many publications from which articles or digests are reproduced are inaccessible to these workers. Knowledge in health fields is accumulating at such an astounding rate that a compendium of this kind is almost indispensable.

The foreword was written by Dr. C. Morley Sellery, Director of the Health Service Section, Los Angeles City Schools, and Past President of the American School Health Association. – John L. C. Goffin, M.D.

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EDITORIAL

Attention is particularly invited to the paper of John E. Burke, M.D., appearing on page 244 of this issue. It brings to the fore a great need in our present thinking, concepts and needs for school health, especially as related to the duties and qualifications of school physicians. Dr. Burke is not only President of the New York State School Physicians Association but he is a Past-President of the American School Health Association, and, as an Assistant Superintendent of Schools in Schenectady, holds and has held for a number of years the unique position of being the only physician in charge of a school health program who is also an Assistant Superintendent of Schools.

In New York State, and in a few other states, there are two varieties of the species of school physicians, full time employes usually employed by the Board of Education, and part time ones. In that state, the part time physician must be a graduate in medicine and licensed to practice in New York. The full time physician, technically known as School Medical Supervisor, to secure a Provisional Certificate, must—in addition to being a licensed Doctor of Medicine who has completed one year of acceptable internship or five years of successful practice of medicine—have six semester hours of post graduate training as below:

Public School Administration and/or School Health Administration 2 to 4 semester hours, and

Principles of Education and/or Principles of Health Education 2 to 4 semester hours.

In order to get a Permanent Certificate, the candidate must have completed, in addition to the above minimum requirement,

six semester hours as follows:

New York State Health Department extension course in Public Health and/or Public Health Administration, 2 to 4 semester hours, and Health Instruction in the Public Schools and/or School Health Service, 2 to 4 semester hours.

This total of twelve semester hours in Education and Health gives the Supervisor a real background. There are several such personnel employed in the schools of New York State.

Dr. Burke suggests certain special training which the school physician should have, especially in the fields of psychiatry and of pediatrics. Basically he seems to have in mind greater emphasis on experience and contact with young children and a greater knowledge and realization of the importance of mental training of the sort that will give the child attitudes that make him not only *fit to live* in the community, but actually *to fit* the community.

A thorough study of this whole situation is badly needed, such study to be made by an experienced ably-led committee, made up of school health personnel and school administrators, who should investigate and report on:

A—The needs and scope of School Health.

B—The type of personnel needed and the number of hours of service from each type per thousand of school population.

C—The School physician.

1—Whom is he to care for,—

2—What care is he to give,—

3—How is he to do it,—

4—What preparation does he need?

D—To be satisfying to the school administrator, the report should include some estimate of salaries and of costs per pupil.

The "Preliminary Report, etc." on the school nurse, which appears in the November Journal of School Health, while based largely on the practices and desires of the school superintendent, gives much information regarding the numbers of nurses employed. Here, too, is the plea for "personnel adequately prepared to guide and execute the (school) health program." C. H. K.

OUTLINE OF SCHOOL HEALTH SERVICE DEPARTMENT*

(Health Service to Educational Department, Building Department, Supply Department, and Secretarial Department)

1. Health Service Personnel

1 Director of School Health Service

1 Supervisor	1 Chief Medical Examiner
1 Epidemiologist (part time)	1 Nurse-Technician
1 Supervisor of Nurses	1 Roentgenologist
34 School Nurses (field work	1 Ophthalmologist (part time)
7 Nurse-Assistants (field work)	(1 ophthalmological position
14 Dentists (part time)	closed temporarily)
14 Dental Assistants (part time)	1 Eye Clinic Nurse
4 Dental Hygienists (permanent	2 Open Air School Nurses
teaching certificates)	1 Chief Clerk
1 Group-Testing Audiometer Nurse	2 Stenographers

Total Employees — 128

2. School Medical Inspection (field work—Dept. of Health)
   a. Admission and exclusion of children who are ill or have been ill.
   b. Inspection for communicable diseases.
   c. Schick testing and immunization.
   d. Tuberculin testing.
3. School Medical Examination (field work—Board of Education)
   a. Annual complete medical examination of each child.
   b. Provision of a complete medical record of each child's health to be filed in the principal's office of each school.
   c. Provision of a nutritional record. Each child is weighed and measured at the time of medical examination.
   d. Milk distribution. Indigent children showing malnutrition are provided with milk at the expense of the Board of Education.
   e. Special examinations for competitive athletics.
   f. Special examination of twelfth grade boys (war measure).
   g. Annual sanitation inspection of each school as required by School Code.
4. Child Care Centers—health service
5. School Nurses (field work)
   a. Coordination or liaison service between the school and the home, the physician and the Board of Education clinics, the home and hospital clinics.
   b. Appointments for eye refractions and dental work at the various Board of Education clinics.
   c. General medical social work.
6. Tuberculosis Program (field work and X-ray clinic)
   a. Tuberculin testing of interscholastic and intramural athletes; also, special physical examinations before permission to engage in competitive athletics; X-ray of positive tuberculin reactors; annual tuberculin test of ninth grade children.
   b. Operation of two open air schools for children with quiescent or inactive tuberculosis, malnutrition, heart disease, and other chronic diseases; also, convalescent children.
7. Dental Clinics
   a. Fourteen dental clinics located in school buildings in different parts of the city. (A dentist and dental assistant in each clinic, operating part time.)

*Pittsburgh Public Schools. Department of School Health Service.

b. Approximately 30,000 dental treatments annually to 10,000 children; 7,000 completed cases each year at a cost of $6.00 per case.
c. Oral hygiene training and education.
d. Prosthetic clinic (artificial teeth for indigent children—Forbes School).

8. Dental Hygienists

Four dental hygienists to examine children in first, second, and third grades and give instruction in oral hygiene, proper diet, use of tooth brush, and importance of dental corrections. Between four and five thousand children to each hygienist.

9. Audiometer Service (Group testing in the field; individual testing at the Board of Education Building)
   a. Group audiometer tests of approximately 25,000 children annually.
   b. Individual audiometer tests of children with fifteen decibels loss of hearing in the better ear.
   c. Cooperation in operation of a hearing conservation class for children with markedly defective hearing; hearing aid training and lip reading.
10. Eye Refraction Clinic (Board of Education Building)
   a. Refraction of eyes of indigent children referred by school medical inspectors and Board of Education medical clinic.
   b. Cooperation in operation of two sight conservation classes for children with markedly defective vision.
   c. Orthoptic clinic (Children's eye training).
11. Central Medical Diagnostic Clinic (Board of Education Building)
   a. Teacher examinations (new applicants, disability retirements, Sabbatical leaves, promotions, reinstatements, maternity leaves).
   b. Examination of custodians and general skilled employees.
   c. Examination of school lunchroom employees.
   d. Examination and approval of applications for home teaching service (heart disease, spastic paralysis, epilepsy and other incapacitating conditions).
   e. Examinations of attendance and educational problem children.
   f. Child labor examinations (Approval of age affidavits).
   g. Examination and approval of certificates of illness made out by private physicians for legal excuse from school.
   h. Examination of children for school transfers because of physical disability.
   i. Blood testing, basal metabolism testing, tuberculin testing, audiometer testing, etc.
12. X-ray Clinic (Board of Education Building)
   a. X-ray of accidents and injuries received in gymnasiums, athletic fields, and on school premises.
   b. X-ray of injuries to employees while on duty.
   c. X-ray of suspected tuberculosis cases.
   d. Examination and X-ray of children who should attend open air school.
   e. X-ray of lungs of children with positive tuberculin reaction.
13. Cooperation with Psychological Clinic (Department of Special Education) —*diagnostic only*
   a. Establishment of intelligence quotients for children referred for special examinations by physicians, principals, Board of Education medical clinic, and Attendance Department.
14. Cooperation and coordination with the Bureau of Child Welfare, Department of Health (infectious and communicable diseases)
15. Cooperation in Health Education and Physical Education (advisory service and regulations)

a. Personal habits, general appearance, diet, nutrition, rest, exercise, harmful substances, home economics, special senses, communicable diseases, mental hygiene, safety, professional health service, physiology, social hygiene, home environment, school environment, community health, first aid.

b. Calisthenics, gymnasium work, swimming, and athletics.

16. Selecting children for medical and surgical service and administering funds provided by the Pittsburgh Council of Parent-Teacher Associations (Ben G. Graham Health Fund) and by the Addison Gibson Foundation. Services are limited to indigent and underprivileged school children.

L. M. SMITH, M.D., Director, Department of School Health Service

* * * * *

ABSTRACTS

Block Organization for Health Education,—The face to face talk of friend with respected friend is still the most effective means of passing on ideas and information. The radio is potent, but large numbers of people do not own radios, and if they do, one cannot be sure that they listen to the right programs. The newspaper is influential, but many people do not read it, and if they do, they may not read the right sections. But the exchange of talk is universal—in the pool hall, at the farmers' market, at the club, around the pot-bellied stove, in the transcontinental train, at the corner drugstore, or over the back fence, people pour out their ideas.

"Thus the Block Plan is simply a method of carrying out home front programs through a block by block organization of neighbors. It is a plan where neighbors can team together for war service with the help of fellow neighbors as their block leaders."

Under this scheme, a community is divided into units of a small number of adjoining families. While the number of families in each unit varies in different communities, in general there are from ten to twenty families in each unit. "Each unit, regardless of size, is referred to as a block and may occupy: (a) an entire square city block, (b) a fraction of a square block, (c) one or both sides of the street, (d) an entire apartment building, (e) a fraction of a large apartment building, or (f) a country neighborhood.

Each unit or "block of families" is headed by *one of its own number.*

The application of the block plan to the field of health education can be made best with a series of illustrations. In Fenton, Mich., war clubs (Block Plan) on their own initiative undertook a program of education designed to bring about a general acceptance of the engagement of a public health nurse. A series of talks and demonstrations were given. These efforts led to a broad interest in public health beyond the original problem of securing

the services of a public health nurse. In Fayetteville, N. C., block workers campaigned to encourage inoculations against typhoid, diphtheria, and smallpox. In La Junta, Colo., block workers were used to help check a diphtheria epidemic. The local director writes that, "The block leaders told the families on whom they called about the threat of diphtheria, warning the mothers to have their children immunized, advising them to keep their children with sore throats home from school, and asking if their children would submit to throat cultures." The director continues by saying that they "located 38 carriers of diphtheria and many were quarantined. They checked the spread of diphtheria temporarily at least, which with a shortage of doctors was very important."

In Mount Vernon, Ind., block leaders conducted a campaign to acquaint housewives with the importance of safety in the home, and to enlist them in the Indiana Home Safety Campaign. In Richmond, Va., block leaders promoted health in their neighborhoods during the month of April, 1943, by forming Health for Victory Clubs, emphasizing the value of nutrition and home nursing, and stressing the advantages of an early diagnosis of tuberculosis. The Richmond block organization also originated campaigns to rid the city of rats. One feature of this effort was a drive to clean up the streets, yards, and alleys, and to beautify the city, as well as to starve the rats into an appetite for poison. Through the neighborhood leaders, Waldo County, Me., increased by 24 per cent the local use of enriched flour and bread in preference to plain white flour and bread. An excellent and effective program for making a survey in an attempt to stamp out infantile paralysis was made in Fort Worth, Tex., under the joint auspices of the Fort Worth and Tarrant County Health Departments, the Tarrant County Chapter of the National Foundation of Infantile Paralysis, and the Tarrant County Office of Civilian Defense. Another effective program for the elimination of rats, garbage disposal, and the control of the yellow fever mosquito was undertaken in New Orleans.

A very promising project of education for the prevention and control of venereal diseases was undertaken in one section of Wayne County, Mich. By adroit management, the co-operation of outstanding civic, religious, and municipal leaders was secured. Groups of block leaders received lectures and read pamphlets on the problem of venereal disease. After their instruction, leaders passed the information on to their neighbors. The coverage was not complete, but was more effective than anything heretofore attempted in that area.—Block Organization for Health Education, Howard Y. McClusky, Ph.D., American Journal of Public Health, June 1944, p. 649. Abstracted by Chas. H. Keene, M.D.

Student Accidents,—Accidental deaths of school-age children reach a peak in the summer months. While this increase is due partly to the tremendous rise in accidental drownings—79 per cent of which occur during the months of May through August—the total of all other accidental deaths also mounts in the summer months.

The start of the new school year should be a challenge to every teacher to start a safety program whose effects will carry over to the next summer.

Student accident reports are available from school systems with an enrollment of 952,000 students. These reports cover accidents causing an absence of one-half day or more or requiring a doctor's attention. For the 1943-1944 school year 16,618 accidents were reported—one accident for every 57 students. The year's rate of 10.3 accidental injuries per 100,000 student days continues the downward trend started in the 1940-1941 school year.

Rates varied from month to month; May had the highest rate, 13.8, and December the lowest, 8.4. The rate rose gradually from 4.1 in kindergarten and 6.8 in the first grade to 14.0 in the seventh grade and then gradually declined through the high school to 9.0 in the twelfth grade.

The number of student-days lost does not necessarily reflect the severity of the accidents. With each advance in grade the days lost declined, ranging from 6.0 for the kindergarten children to 1.8 for the twelfth-grade students.

Of the total number of accidents reported, 24.5 per cent were in school buildings, 19.0 per cent on school grounds, and 7.5 per cent on the way to or from school. Thus 51 per cent of the accidents occurred while children were under the jurisdiction of the school, as compared to 44 per cent in the 1942-1943 school year.

Of the accidents occurring in the school building, gym accidents were the most frequent; of the accidents occurring on the school grounds, those in unorganized activities were the most frequent. The remaining 49 per cent was split between home and "other" accidents, 18 per cent for the home and 31 per cent for "other." Playground and street and sidewalk accidents were most frequent among the "other" accidents—Elizabeth Hayes, Safety Education, Sept., 1944.

* * * * *

(*Continued from page* 252)

In Belgium deaths from tuberculosis are said to have increased more than 50 percent after one winter of German occupation; the toll was particularly heavy among the children. According to Dr. R. F. Minoli, reporting in the *Milbank Memorial Fund Quarterly* of July 1942 tuberculosis mortality in Paris for the first six months of 1941 already showed an increase of 10 percent over the corresponding months in 1939. Among young children the increase was nearly 30 percent. A notable change was the rise in the proportion of rapidly fatal cases. For Holland, such figures as are available indicate an increase of well over 50 percent in the mortality from tuberculosis during the period of the war. In Italy there has been a threefold increase in tuberculosis mortality in that country. The situation is undoubtedly even more serious for those overrun countries from which we have no data at all, such as Poland, Greece, and Yugoslavia. Even Germany itself, the best fed of the continental countries at war, experienced a rise in its death rate from this disease, an increase of 24 percent from 1939 to 1942 being indicated for the population in its large towns.

Turning to the record of the far eastern Axis partner, Japan, we find a serious tuberculosis situation. For at least two decades prior to Pearl Harbor, the death rate from this cause in Japan fluctuated about the level of 200 per 100,000. Thus, even before the war, our enemy in the Pacific was more than a generation behind our own country in the control of the disease. Although recent data are not available, it is quite probable that the burdens of war have resulted in an upswing in the tuberculosis mortality among the Japanese people.

The present proposal by the UNRRA is to send doctors, nurses, and medical supplies as soon as it is feasible to those areas where disease and starvation are most prevalent. Meanwhile steps are being taken to provide the people with more food, clothing, and even shelter. To combat tuberculosis, it is of prime importance to isolate advanced cases and to discover new ones; here, the recently developed practices of taking X-rays in mass may be applied to advantage. However, in the long run, to secure the greatest benefit from these specific activities, the nations concerned will have to take steps to raise their standard of living by their own efforts. They will need to cope with the difficult medical problem of tuberculosis control for many years. —Statistical Bulletin, Metropolitan Life Insurance Co., September, 1944.—Abstracted by C. H. Keene.

* * * * *

NOTES

Cheese As a Factor in Disease Transmission,—New evidence that cheese processed from raw milk may play an important role in the transmission of typhoid fever and other communicable diseases has caused health officials throughout the country to give careful consideration to the problem of protecting the public against illness from this source.

During the first half of 1944, three serious outbreaks of typhoid fever occurred respectively in California, Indiana, and Alberta, Canada. All were traced to cheese made from raw milk. Three outbreaks of this disease, reported from Manitoba, Canada, in recent years were found to have been caused by the consumption of unripened cheddar cheese made from unpasteurized milk. It is quite likely that there have been other similar outbreaks which were either unrecognized or unreported.

Only a few of the largest manufacturers make cheese from pasteurized milk. However, authorities seem to agree that good cheese can be made from pasteurized products with the exception of one or two varieties which for commercial reasons must be aged. In the past, it has been customary to age cheese from three to six months. War shortages and the lack of a ceiling price differential for aged cheese appear to have stimulated the practice of marketing unripened cheese during the past year or two. This may account for the marked increase this year in outbreaks of disease caused by cheese.—Health News, N. Y. State Dept. Health, Oct. 9, 1944.

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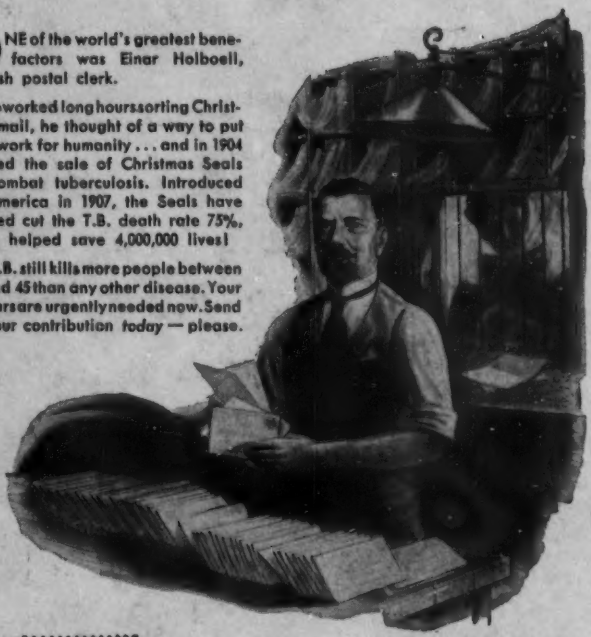

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